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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,958	01/11/2005	Andreas Martin	DECL:E34.002APC	8574
20995 7590 10/20/2008 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614				
EXAMINER				
SACKEY, EBENEZER O				
ART UNIT		PAPER NUMBER		
1624				
NOTIFICATION DATE		DELIVERY MODE		
10/20/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
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Office Action Summary

Application No.

10/516,958

Applicant(s)

MARTIN ET AL.

Examiner

EBENEZER SACKEY

Art Unit

1624

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 15-29 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Status of the Claims

Claims 1-31 are pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Then rejection of claims 10-11 and 13 under 35 U.S.C 112, second paragraph has been withdrawn.

Claim Rejections - 35 USC § 103

The previous rejection of claims 1-14 and 30 under 35 U.S.C. 103(a) has been withdrawn in view of this new rejection that follows.

Claim Rejections - 35 U.S.C. § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-14 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayami et al. (EP 141 228 cited earlier) and Hayami et al., (cited earlier) in view of Mamedov et al., (U.S. Patent Number 6,710,011).

Applicants claim a method for the preparation of halogenated benzonitriles by vapor phase ammoxidation of halogenated C₁₋₆ alkyl benzenes, in the presence of water vapor at temperatures between 300 and 500°C, using a three-component catalyst into a fixed bed reactor wherein the said catalyst consists of a promoted VPO active phase provided on a carrier.

Determination of the scope and content of the prior art (MPEP §2141.01)

Hayami et al., teach the preparation of 2,6-dichlorobenzonitrile by ammoxidation of 2,6-dichlorotoluene in the vapor phase in the presence of an ammoxidation catalyst in a fixed bed reactor. See the entire reference especially pages 3-5 and Example 1.

Huang et al., teach the preparation of halogenated nitriles by ammoxidizing 2,6-dichlorotoluene in the presence of VPO catalyst and water. See the entire publication.

Mamedove et al., teach the vapor phase ammoxidation of alkanes and olefins in the presence of general empirical formulae embraced by the current catalyst formula. See the entire publication especially column 3, lines 50-60. Note where M is aluminum and titanium, Q and Q' is molybdenum and phosphorus, iron, chromium or cobalt.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The instantly claimed method differs from Hayami et al., in that oxygen and ammonia is present in the gas component used in the Hayami et al., preparation. Note however, that Huang et al., teach that it is not necessary to use oxygen and ammonia during the ammoxidation of 2, 6-dichlorotoluene in the presence of promoted VPO catalysts at process temperatures between 300 and 500⁰ C. Note the first paragraph of Huang et al., and page 2/3. Additionally, Mamedov et al., teach that vapor phase ammoxidation in the presence of water is known and has been expected to catalyzed ammoxidation reactions. See Comparative Example 1, column 6, lines 44-57 etc. Note Mamedov is replete with the use of water in the process and also teaches that the vanadium, phosphorus, aluminum and titanium core is known in ammoxidation catalyses. It is noted that claims 7-9 requires specific catalyst carries such as Al₂O₃, TiO₂ anatase. Hayami teaches that derivatives of the required carries such as titania and alumina can be used during the ammoxidation of 2, 6-dichlorotoluene. See page 4, last paragraph, which is also applicable to claims 12 and 13. It is further noted that claim 12 requires specific ratios i.e., 0.5 to 2.0 by weight of the inert medium. The specific ratio limitation is not taught by any of the references. However, the use of range of alternative ratios in a well-known process such as ammoxidation is considered *prima facie obvious* since ratios are nothing more than the manipulation of process parameters to maximize yield and/or selectivity. In the absence of proof to the contrary, the ratio claimed is considered as a modification available to one of ordinary skill in the art. Note *In re Boesch*, 205 USPQ 215, (1980).

Finding of prima facie obviousness---rational and motivation (MPEP §2142-2143)

Accordingly, at the time of filing this application, it would have been *prima facie*

obvious to one of ordinary skill in the art to prepare 2, 6-dihalogenobenzonitrile as disclosed by Hayami et al., guided by the disclosures of Huang et al., and Mamedov with a reasonable expectation that the resulting product would be pure because Hayami et al., discloses that any requisite catalyst can be used in the preparation of 2, 6-dichlorobenzonitrile and Mamedov teaches that ammoxidation catalysts embracing the core elements are known. See page 3 of Hayami and columns 3 and 4 of Mamedov. Hence, one in possession of Hayami et al., guided by the disclosure of Huang et al., is in possession of the instant process absent a showing of unexpected results or properties. The reaction that is being claimed is a predictable and expected reaction. Thus, the use of VPO catalyst in the instant process per say is uninventive and hence, *prima facie obvious*.

Accordingly, the instantly claimed process would therefore have been suggested to one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to E. Sackey whose telephone number is (571) 272-0704. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson, can be reached on (571) 272-0661. The fax phone number for this Group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

**/James O. Wilson/
Supervisory Patent Examiner, Art Unit 1624**